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TBIO, CVIS, RS

SUBJECT: DOE DEPUTY SECRETARY PONEMAN'S MEETING WITH  
RUSSIAN MINISTER OF EDUCATION AND SCIENCE FURSENKO ON  
BILATERAL ENERGY AND SCIENCE COOPERATION

MOSCOW 00001612 001.2 OF 005

1. (SBU) SUMMARY. DOE Deputy Secretary of Energy Poneman and Ambassador Beyrle met with Russian Federation Minister of Education and Science (MES) Andrey Fursenko on June 10, 2009, in Moscow to discuss future DOE-MES cooperation in energy efficiency, carbon capture and sequestration, and nanotechnology. Ambassador Beyrle reinforced the energy cooperation message and offered two additional opportunities for future scientific cooperation including the upcoming 50th anniversary of Russian Academy of Science and United States National Academy of Science cooperation in Moscow on June 17, 2009 and President Obama's Moscow visit in early July, 2009.

Fursenko concurred with the need for increased cooperation and raised three potential areas of cooperation: exchanges of energy efficiency expertise between American companies and Russian cities, nanotechnology, and Russian and American university partnerships. END SUMMARY.

2. (SBU) Fursenko recalled other DOE officials with whom he has worked and noted that he had met previously with Secretary Chu in Okinawa in his capacity as a Nobel Prize winner. Fursenko, who conducted the meeting in English, seemed relaxed and happy to be meeting with Poneman and offered to discuss science and energy issues. He informed Poneman that he would prefer to listen to Poneman on where the U.S. and Russia could work together because Poneman comes to the job fresh. (Embassy Comment: This openness is a marked departure from MES's previous behavior since September when Fursenko's staff repeatedly declined to schedule an introductory meeting with the Ambassador. End comment.) He was flanked by MES Head of International Relations Department Vladislav Nichkov, and MES Head of the International Relations Department's Bilateral Section Konstantin Chinkov. Fursenko was pleased to hear from Poneman that Secretary Chu is looking forward to a future meeting in Russia or the U.S..

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ENERGY EFFICIENCY  
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3. (SBU) Fursenko recalled the helpful, informal discussion on climate change at the most recent Carnegie ministers' meeting. He posited that the U.S. and Russian positions on climate change are closer to each other than those of Japan and the European Union. He called climate change a complicated problem requiring a dispassionate study of

empirical data to track hundred-year trends, rather than emotional talk about melting Arctic ice. He immediately added that the Russian Federation needs to work on the science to seize any opportunity to minimize loss of heat and carbon dioxide emissions and to strive for energy efficiency. Arguing that focusing on technology can compensate for future resources limitations, he pointed out that the political decision is important, as Sr. David King, a senior British climate change specialist has shown by demonstrating technology can improve the environment without worsening the economic situation. Fursenko stated that such new technology was his responsibility and he proposed starting joint work on energy-efficient lighting in buildings and more efficient fuels such as bio and hydrogen fuel. Fursenko stated that MES, and FASI in particular, had had some cooperation with U.S. institutions on carbon sequestration projects, but we have to develop these projects further. MES's goal is not to interfere with Russian scientists. MES recognizes that Russia needs to evaluate its own efficiency, because according to OECD measures, the energy expenditure in Russia for one GDP unit is fifteen times more expensive than Japan and five times more expensive than the United States. But Fursenko hastened to point out that this is not Russia's fault because its GDP is based on manufacturing and raw materials. He suggested that the U.S. and Russia join forces to study, consult, and then explain to the international community the reasons behind for the differences.

14. (SBU) Concurring with Fursenko's mention of building efficiency, Poneman explained that 40 percent of U.S. greenhouse gas emissions comes from buildings and that modest investments in such areas as insulation can reap immediate energy savings. Poneman commented that it would be useful for U.S. and Russian experts, perhaps from the U.S. National

MOSCOW 00001612 002.2 OF 005

Academies and Russian Academy of Sciences, to meet in the near future to identify needs and technological capabilities, possibly by creating sister city relationships. Poneman told Fursenko that the U.S. National Security Council desires practical Presidential Summit deliverables to implement President Medvedev and President Obama's joint statement on April 1 in London. Offering Fursenko a list of proposed, concrete areas for joint work (attached at the end of this cable), Poneman expressed DOE's and other U.S. government agencies' preparedness to work with MES to identify areas of scientific expertise and to define concrete ways to work together in the near term. Poneman specifically mentioned energy efficiency, carbon capture and sequestration, nanotechnology, and research in energy related fields as potential areas of cooperation.

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NEED TO SHOW CONCRETE FOUNDATION FOR SUMMIT  
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15. (SBU) Fursenko repeated that Russia has no choice but to find a way to save energy in buildings. Prices are rising for heat and electricity. But if proper technology is installed, prices won't increase even though the city and government will need to find a way to pay for the investment in technology. Fursenko suggested three concrete projects. First, he recalled that when he was Deputy Minister of Industry, Science and Technology, he had pushed an important bilateral energy efficiency project with the U.S. company Emerson in the city of Chelyabinsk that both saved consumers money and addressed climate change. Second, he proposed working on with the Kurchatov Institute on new energy through nanotechnology and basic research under ITER. Third, Fursenko pointed to Russian and American university partnerships like that between the University of Texas and Moscow's Engineering and Physics Institute (MEPhI) that train people and increase scientific research, particularly if they are focused on energy, environment, and climate change. Fursenko concluded that it is important to show a concrete foundation for the next meeting of the Presidents.

But he recalled that he discussed with former science advisor Marburger, his co-chair of the Joint Science and Technology Committee, that the U.S. and Russia have very different systems. Russia, like the European Commission, can direct that institutes cooperate - the United States cannot. The United States focuses instead on scientist-to-scientist exchanges. Nonetheless, both sides have potential partners whom they can agree should be ordered to prepare some cooperation in time for the July summit.

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SEIZE WINDOW NOW TO MAKE PROGRESS  
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¶6. (SBU) Ambassador Beyrle stated that current government-government science cooperation between our two nations is weak and was stronger ten years ago. He stressed that Russia and the United States have two opportunities to move beyond a general wish for more cooperation to concrete action. The first is the June 17-18 50th anniversary of cooperation between Russian Academy of Sciences and United States National Academies when the academies will brainstorm on concrete tasks. The second is President Obama's Moscow visit in early July 2009 during which the Joint Science and Technology Committee could once again become one of the subgroups under a binational commission. This committee would develop mechanisms to implement concrete ideas on how to improve energy efficiency and increase cooperation in education and science. Russia has much to teach the U.S. in science education, the Ambassador continued. It would be wonderful to bring the top 500 Russian science students to science summer camps in the United States, but we would need Fursenko's help. Happily, the academies and the joint science and technology committee will tell us what to do.

¶7. (SBU) Poneman echoed Ambassador Beyrle's remarks, noting that our two governments have a short window of opportunity to take advantage of the direct benefits of working together and that we need to act now to ensure that the strong foundation is reinforced by concrete accomplishments. This

MOSCOW 00001612 003.2 OF 005

way the foundation will hold up even when the inevitable problems arise. Fursenko agreed that both countries need to use the opportunity of the summit to find a way to turn proposals into concrete actions. Both sides have homework and should propose concrete ideas that could be mentioned by the presidents. Poneman commented that bringing in the private sector is important so that technology can be smoothly transferred and its effect amplified. Fursenko concurred that this is very important, adding that he works closely on energy efficiency with Rosatom's Director General Kiriyyenko and Minister of Energy Shmatko, with whom he interacts outside of formal government meetings, which facilitates things. Once there is industry demand to save energy, Fursenko said, the Russian government can study the science on how to save energy. Poneman replied that Secretary Chu is committed to removing the stovepipes that separate science and industry.

¶8. (SBU) Ambassador Beyrle noted that administrative processing for Russian scientists to receive visas was recently shortened from 150 days to approximately 30 days and that most scientists would receive visas within 15 days. This should significantly enhance cooperative scientific partnerships. Fursenko recalled that at a conference in Europe and another conference in Khanty-Mansiysk, he met with Americans of Russian origin from Minnesota and Salt Lake City who work in science and medicine. Although they were not interested in moving back to Russia, they wanted to help develop Russian life sciences by inviting young Russians to the United States. Fursenko promised to get their names to the Embassy. He commented that this is in line with President Medvedev's instruction to cooperate with the Russian diaspora and he thinks Medvedev will be positive about it. (Embassy Note: Reaching out to the Russian diaspora was also an important part of Rusnano chairman

Anatoliy Chubays's meetings in May in California. End Note)  
The Ambassador noted that we still need to resolve the problem of taxation of grants, which the National Institutes of Health and CRDF are experiencing. Fursenko cut the Ambassador off by waving a hand and brusquely interjected that he is not talking about U.S. money, but about a cooperative project in which each side would fund its own participants.

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ISTC IS A GYPSY  
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¶9. (SBU) Poneman inquired about the future of the Moscow-based International Science and Technology Center (ISTC), which he recognized was created at an earlier phase in the bilateral relationship. However, in the same spirit of cooperation, Poneman hoped that we could find a way to take its benefits and transform the center so that it could continue to play a useful role. Introducing his comment with "Frankly speaking," Fursenko said that he had worked with the ISTC and it was not unlike a RAS institute that created a new lab to solve a specific problem. When the problem is solved, it is like a suitcase without a handle. "It's not easy to take it with you because it's so heavy, but it's a pity to leave it behind as well." Fursenko continued that ISTC was created for a very concrete, serious purpose that is now mainly solved. Although Rosatom and not MES is ISTC's main partner, ISTC needs to become a new institute or be used for an absolutely other purpose. This is like the "unkind joke about a gypsy father who comes home from work to find his children all dirty and haggard. He asks himself, which one should I wash and which one should I burn?" Fursenko ended by saying that he thought it would be more efficient to build a new institution for this new purpose because it often takes more time and resources to transform an old organization to respond to a new purpose. Poneman parried by noting that although he does not know the details, it seems likely to be less expensive to buy a new handle than a whole new suitcase. Responding to Poneman's offer to solve this together, Fursenko proposed that the two sides conduct a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis to determine what kind of an instrument is needed.

MOSCOW 00001612 004.2 OF 005

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HOME WORK  
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¶10. (SBU) Poneman closed by reflecting that we have many ideas of how the presidents can showcase science when they meet. This will demonstrate that our countries do not just talk together, but they work together. Fursenko, recognizing that time was short, agreed to contact Russian Ambassador to the United States Kislyak, who has no reason to limit himself merely to weapons. Education and science, Fursenko proclaimed, are key milestones for future development. He had told Kislyak he was willing to go to the United States to meet with his counterparts there, or to invite them to Moscow. The ball is now in the court of the RF Ministry of Education and Science, and Fursenko stated that he would forward future cooperative proposals via Post Moscow within the next few days. In closing, Fursenko invited DOE Secretary Chu to visit Fursenko's Ministry in Moscow and stated that he (Fursenko) desired to visit the U.S. for further cooperative discussions. He had hoped to meet Science Advisor Holdren at the July Carnegie meeting, which Italy postponed until mid-November. Russia will host the October meeting, before which Fursenko hopes he will have met with his partners.

¶11. (SBU) Deputy Secretary Poneman has cleared on this cable.

(SBU) ATTACHMENT

Potential Areas for Energy and Climate Change Cooperation

(non-paper)

**Energy Efficiency.** Share challenges and exchange best policy practice in developing building codes and other standards in the industrial and residential sectors, as well as training for energy audits. Exchange knowledge on how to improve energy conservation in federal buildings. Reach beyond Washington and Moscow to engage local governments through an Energy Efficiency Blueprint program between &twinned8 municipal governments, whereby experts in each locality pursue projects in parallel and exchange their experience and lessons learned. Exchange views on how best to advance energy efficiency through market practices.

**Renewable Energy.** Discuss ways to promote distributed generation of power from renewable energy sources in remote areas. Identify barriers to the development of wind power. Share expertise on the development of second-generation biofuels and explore options for developing sustainable woody biomass utilization (e.g., harvesting forest brush and debris) to provide carbon-neutral energy and decrease air pollution. Explore potential cooperation on solar, geothermal, and/or tidal energy.

**Clean Energy Innovations.** Pursue joint R&D activities between our scientific establishments. Partner with Russia on &clean-coal8 technology. Cooperate on developing technologies that will bridge the transition to a low-carbon economy, including carbon capture and storage. Jointly commit to active participation in the Carbon Sequestration Leadership Forum. Discuss possibility that Russia could host one of the 20 full-scale demonstration projects the G-8 intends to launch by 2010.

**Energy Investment Environment.** Assess ways to implement the G-8,s St. Petersburg Energy Security Principles, developed under Russian leadership, to create open and transparent market conditions that attract private sector investment and competition into the global energy sector, including both the U.S. and Russian energy sectors.

**Global Climate Change.** Share information on the U.S. government,s experience regulating SO2 and NOx through a cap and trade program, as Russia has signaled its intention to develop market mechanisms as part of its recent draft &climate doctrine.8 Explore possibilities for joint work to help developing countries meet mitigation and adaptation challenges.

**Gas Flaring Reduction.** Seek ways to advance efforts to reduce the volume of natural gas Russian oil producers flare each year, as this is the source of as much as 10 percent of Russia,s annual greenhouse-gas emissions and a significant source of air pollution.

MOSCOW 00001612 005.2 OF 005

**Oil and Gas System Efficiency.** Expand current bilateral efforts under the Methane to Markets Partnership and advance technical cooperation to improve efficiency in the oil and natural gas sectors to reduce leaks and losses of methane and increase natural gas sales.

**Coal Mine Methane Capture and Utilization.** Advance ongoing efforts and cooperation under the Methane to Markets Partnership to recover and utilize coal mine methane as a clean energy source

**Power Sector Infrastructure.** Pursue collaboration on improving the efficiency of generation, transmission, and distribution sector operations, including improvements to power system stability and load management as well as efficiency gains through the implementation new grid technologies.

**Liquefied Natural Gas (LNG).** Discuss cooperation on the commercial development of additional LNG supplies including liquefaction facilities in Russia, particularly in the northern European portions of Russia, as one tool to pursue mutual goals in energy security and to increase market flexibility and diversity.

**Arctic Cooperation.** Jointly discuss ways to preserve the environment and protect indigenous populations while pursuing appropriate development in the Far North, in coordination with our joint membership and growing

cooperation in the Arctic Council.

Data Exchange. Periodically exchange analysis and projections of energy and electricity demand, production, and pricing.

BEYRLE